

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical connector comprising:
a receptacle connector; and
a plug connector fitted to the receptacle connector;
wherein a connecting end face side of a multimode optical fiber is fixed to the plug connector; and
a light emitting element having a radiation numerical aperture larger than the numerical aperture of said multimode optical fiber, and a convergent lens for converging light emitted from the light emitting element so as to provide an incident numerical aperture of about 0.25 or more but smaller than the numerical aperture of said multimode optical fiber and making this light incident to said multimode optical fiber are arranged in said receptacle connector.
2. (Original) An optical connector according to claim 1, wherein the light emitting element is set to a light emitting diode (LED).
3. (Original) An optical connector according to claim 1, wherein the multimode optical fiber is set to a plastic optical fiber having a diameter not less than 0.5 mm.
4. (Original) An optical connector according to claim 1, wherein the connecting end face of the multimode optical fiber is arranged in a position deeper than a connecting end face of the plug connector.
5. (Currently Amended) ~~An optical connector according to claim 1,~~ An optical connector comprising:
a receptacle connector; and
a plug connector fitted to the receptacle connector;
wherein a connecting end face side of a multimode optical fiber is fixed to the plug connector; and
a light emitting element having a radiation numerical aperture larger than the numerical aperture of said multimode optical fiber, and a convergent lens for converging light emitted from

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the light emitting element so as to provide an incident numerical aperture smaller than the numerical aperture of said multimode optical fiber and making this light incident to said multimode optical fiber are arranged in said receptacle connector;

wherein a light receiving element arranged side by side with the light emitting element is arranged in the receptacle connector;

a first multimode optical fiber optically connected to said light emitting element, and a second multimode optical fiber optically connected to said light receiving element are arranged side by side in the plug connector; and

an optical connection mediation optical fiber is arranged on a light incident side of said light receiving element in said receptacle connector.